

What is claimed is:

1. A white film with a thickness of from 10 to 500 μm whose principal constituent is a crystallizable thermoplastic, wherein the film comprises at least one titanium dioxide of the rutile type as white pigment and at least one optical brightener, where the optical brightener or the titanium dioxide or the optical brightener and the titanium dioxide are fed as a masterbatch during film production.

2. The white film as claimed in claim 1, wherein the film comprises a crystallizable thermoplastic selected from the group consisting of polyethylene terephthalate, polybutylene terephthalate and polyethylene naphthalate.

3. The white film as claimed in claim 1, wherein the amount of white pigment is between 0.3 and 25% by weight, based on the weight of the crystallizable thermoplastic.

4. The white film as claimed in claim 1, wherein, based on the weight of the crystallizable thermoplastic, from 10 to 50,000 ppm, of optical brightener are present in the film.

5. The white film as claimed in claim 4, wherein the film comprises an optical brightener selected from the group consisting of bisbenzoxazoles, phenylcoumarins and bisstearyl biphenyls.

6. The white film as claimed in claim 1, wherein, besides the optical brightener, a polyester-soluble blue dye selected from the group consisting of cobalt blue, ultramarine blue, anthraquinone dyes and combinations thereof, is present in the film, and the amount of blue dye is from 10 to 10,000 ppm, based on the weight of

the crystallizable thermoplastic.

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7. The white film as claimed in claim 1, wherein the film comprises titanium dioxide particles which are composed of at least 95% by weight of rutile and have an average particle size of from 0.10 to 0.30 μm (Sedigraph method).

8. The white film as claimed in claim 7, wherein the titanium dioxide particles have a coating of inorganic oxides or of an organic compound, or of inorganic oxides and of an organic compound and wherein the coating comprises from 1 to 12 g, of inorganic oxides or from 0.5 to 3 g, of organic compound, based or from 1 to 12 g of inorganic oxides and from 0.5 to 3 g of organic compound based on 100 g of titanium dioxide particles.

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9. The white film as claimed in claim 1, wherein the whiteness of the film is $\geq 85\%$, and its Yellowness Index is ≤ 40 , in particular ≤ 30 , at a thickness of from 10 to 500 μm .

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10. The white film as claimed in claim 1, wherein the film has one or more layers, and wherein the embodiment having more than one layer has been built up from at least one core layer and from at least one outer layer.

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11. The white film as claimed in claim 10, wherein the titanium dioxide and also the optical brightener are present in the core layer or in the core layer and in the outer layer(s).

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12. A process for producing the white film as claimed in claim 1 by extrusion, in which the thermoplastic material titanium dioxide and optical brightener is melted in an extruder, extruded through a slot die and quenched on a chill roll, as a substantially

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amorphous prefilm, and then reheated and stretched longitudinally and transversely, or transversely and longitudinally, or longitudinally, transversely and again longitudinally and/or transversely, which comprises establishing the stretching temperatures at a temperature of from $T_g + 10$ K to $T_g + 60$ K and establishing a longitudinal stretching ratio of from 2 to 6, and a transverse stretching ratio of from 2 to 5, and then heat-set the film.

13. The process as claimed in claim 12, wherein the heat-setting of the film is carried out at oven temperatures of from 200 to 260°C.

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